



FACILITY COMPLIANCE INSPECTION REPORT

Division of Waste Management Solid Waste Section

UNIT TYPE:											
Lined MSWLF		LCID		YW		Transfer		Compost	X	SLAS	COUNTY: Chatham PERMIT NO.: 19-06 SWC FILE TYPE: COMPLIANCE
Closed MSWLF		HHW		White goods		Incineration		T&P		FIRM	
CDLF		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF	

Date of Site Inspection: January 17, 2013 **Date of Last Inspection:** January 31, 2012

FACILITY NAME AND ADDRESS:

M^cGill Environmental Systems of NC, Inc. – Merry Oaks Facility Large, Type 4 SWC Facility
 634 Christian Chapel Church Road
 New Hill, NC 27562

GPS COORDINATES: N: 35.63591 E: -79.00802

FACILITY CONTACT NAME AND PHONE NUMBER:

Steve Cockman, Operations Manager
 w. 919-362-1161
 c. 919-542-8903
 f. 919-362-1141
scockman@mcgillcompost.com

FACILITY CONTACT ADDRESS:

Steve Cockman, Operations Manager
 M^cGill Environmental Systems of NC, Inc. – Merry Oaks Facility
 634 Christian Chapel Church Road
 New Hill, NC 27562

PARTICIPANTS

John Patrone, Environmental Senior Specialist - Solid Waste Section (SWS)
 Donna Wilson, Environmental Engineer – SWS
 Steve Cockman, Operations Manager - M^cGill Environmental Systems of NC, Inc. – Merry Oaks Facility

STATUS OF PERMIT:

Permit To Operate (PTO) issued December 8, 2010
 PTO expiration date December 8, 2015

PURPOSE OF SITE VISIT:

Comprehensive Inspection

STATUS OF PAST NOTED VIOLATIONS:

None

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OBSERVED VIOLATIONS

None

The item(s) listed above were observed by Section staff and require action on behalf of the facility in order to come into or maintain compliance with the Statutes, Rules, and/or other regulatory requirements applicable to this facility. Be advised that pursuant to N.C.G.S. 130A-22, an administrative penalty of up to \$15,000 per day may be assessed for each violation of the Solid Waste Laws, Regulations, Conditions of a Permit, or Order under Article 9 of Chapter 130A of the N.C. General Statutes. Further, the facility and/or all responsible parties may be subject to enforcement actions including penalties, injunction from operation of a solid waste management facility or a solid waste collection service and any such further relief as may be necessary to achieve compliance with the North Carolina Solid Waste Management Act and Rules.

ADDITIONAL COMMENTS

On January 17, 2013, John Patrone and Donna Wilson met with Steve Cockman to conduct a comprehensive inspection of the McGill Environmental Systems of NC, Inc. – Merry Oaks Facility Large, Type 4 SWC Facility on Christian Chapel Church Road in New Hill, Chatham County.

1. The facility is a Large, Type 4 Solid Waste Compost (SWC) Facility. It produces compost from industrial and municipal residuals and sludges, grease trap waste, and food and agribusiness wastes. And from a variety of bulking agents: ash, yard waste, wood mulch, tobacco waste, and sawdust.
2. Approval from the SWS – Permitting Branch shall be obtained prior to acceptance of additional materials.
3. Ensure that drywall (gypsum) is permitted to be accepted.
4. Material is received from counties within North Carolina.
5. The facility permit, site map, and operations plan were discussed.
6. Compost is sold in bulk to landscape supply businesses, grading companies, and to the agribusiness community.
7. Compost operation is conducted on ~ 16 acres of ~ 46 acre site.
8. The facility is in operation Monday through Friday 8:00 am to 5:00 pm and Saturday 8:00 am to noon.
9. Active compost operations and compost curing are conducted within the facility building. Feed stocks are off-loaded into a mixing and bulking pit. Bulking material is brought into the pit from outside via adjacent bay door. Mixed material is stockpiled within the pit area until enough is on-hand to create an active compost pile. The material is placed into positive aeration active compost bays to meet “process for further reducing pathogens” (PFRP). Afterwards, material is screened (via dedicated screener) and placed in a triple-wide bay to meet “vector attraction reduction” (VAR). Material removed from the active compost bays awaiting VAR is stockpiled in the building, in an area open to the weather/not under cover. This area is ~ 15,000 yd³. The pile of screened material, to be placed in the VAR area, is stored outside until moved into the building. Overs from this screening process are stockpiled in the building open weather storage area. Material is considered cured after achieving VAR. Cured product is screened (via dedicated screener) and stored outside. The rescreened compost is finished product. Finished product is stored in storage bays constructed of large cement block.
10. The facility has 10 individual active compost bays (Nos.: 1,3,5,7,9,11,13,15,17, and 19) and a curing area constituting what would be three bays (Nos.: 21, 23, and 25). Each bay has a dedicated positive aeration unit (three units in the curing area).
11. An active compost bay pile is constructed with a layer of wood chip, 7 feet of material to be composted, and 1 foot of finished compost along the front of the pile, facing the open end of the bay.
12. The front end loader that works in the pit also loads material into the active compost bays. When material has met PFRP it is removed by a second front end loader that screens the material and readies it for the VAR process. Mr. Cockman stated that each front end loader is dedicated to a prescribed operation and if secondary use is required the bucket is decontaminated.
13. Each active compost bay has a reinforced polyethylene laminate material tarp that remains in-place across the open portion of the bay. The mixing and bulking pit bay door and entranceway within the building to the vehicle operations passageway, from the pit to the active compost bays, have the same tarps that are raised-up during daily facility operation and drawn-down afterhours.

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14. The mixing and bulking pit, active compost bays, and curing area are equipped with exhaust fans that route to a biofilter located outside, adjacent to the building.
15. There are six biofilters, each containing five twelve-inch perforated plastic pipes. The biofilters are constructed on the ground, atop a clay ash pad followed by an initial layer of wood chip, perforated pipe, a layer of compost, and a second layer of wood chip. The area allotted for the biofilter is ~ 380' x 110' x 3'. Maintenance pathways/areas not covered with media are throughout the length and width of the biofilter, such that media coverage is ~ 280' - 300' in length.
16. Mr. Cockman stated that the biofilter media was replaced in May – June 2012 and should function as designed for 3 – 5 years.
17. Each group of active compost bays Nos.: 1, 3 and 5, Nos.: 7 and 9, Nos.: 11 and 13, and Nos.: 15, 17, and 19 exhausts through a manifold to one of four biofilter units. The mixing and bulking pit exhausts to a dedicated biofilter unit. And the curing area exhausts through a manifold to a dedicated biofilter unit.
18. There are a total of 19 fans: 13 positive aeration fans and 6 exhaust fans.
19. High carbon bulking material is stored outside, behind the building. Wood and yard waste are ground routinely/daily. The facility maintains a contract grinder unit on site.
20. The facility building is ~ 112,500 ft². Rainwater that enters the building via the open to the weather/not under cover storage area is absorbed by the stockpile of material awaiting VAR. The vehicle operations passageway is covered with a layer of mulch/compost to absorb leachate. The mulch/compost is then removed and incorporated into the mixing and bulking pit.
21. The facility has a 110,000 gallon liquid sludge aboveground storage tank (AST). Mr. Cockman stated that absorbent material is on-hand in case of emergency. And that the facility plans to discontinue the use of the liquid sludge AST. Liquid sludge is dumped directly into the mixing and bulking pit.
22. Stockpiling of finished product shall be limited to a height of 30 feet.
23. The facility operational capacity is limited to 151,200 tons of materials composted per year.
24. Vehicle scale calibration and test was conducted, and the remote display interface board serviced, by Central Carolina Scale, Inc. on May 9, 2012. A finding of zero error is noted.
25. The facility maintains records of the amount and type of material received. The amount of material received was verified for 2012. The facility received 76,421.76 tons of material: 56,372.59 tons of feedstock and 20,049.17 tons of bulking material. The amount of compost sold is 24,000.44 tons or 41,442 yd³. And the amount of cured compost on site is ~ 15,000 yd³.
26. The facility annual report (FAR) was received by the SWS, dated July 24, 2012. Facility throughput for July 2011 through June 2012 is 52,794.83 tons. And the amount of compost produced is 25,219.42 tons.
27. The facility produces Grade A compost. An information pamphlet is provided for customers in the office and on-line material is available at the facility website: www.mcgillcompost.com. The customer product manifest has a caution note for proper use.
28. Compost bay records for PFRP and VAR were verified for January 3 through December 24, 2012. Mr. Cockman stated that on average six active compost bays are taken-up (to be screened and staged for VAR) weekly.
29. The facility uses a program from the University of Maine to monitor bulk density and C:N ratio. Moisture level is verified by hand per the facility operating manual, page 32. Weekly data for 2012 was verified.
30. The facility conducts total metals analysis, conducted by Pace Analytical Services, Inc. in Eden, NC. Records were verified for material collected on May 1, 2012 and December 6, 2012.
31. The facility conducts monthly total metals, pathogen, and manmade inerts analysis conducted by Soil Control Lab in Watsonville, CA. Records were verified for 2012.
32. When pathogen analysis is conducted, if fecal coliform and salmonella are tested, both select pathogens must pass/be within respective required limit.
33. If a select pathogen fails/is not within respective required limit a second pathogen analysis must be conducted within seven calendar days. Only compost that passes/is within respective required limit shall be distributed to the public.
34. The facility shall maintain records of additional pathogen analysis conducted for test result verification and a written log tracking the retested product.

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35. The facility has a 20,000 gallon water tank available for yard maintenance and dust control.
36. There was no odor detected at the facility boundary.
37. The facility maintains a record of odor complaints received. Complaint received December 7, 2012 - Remedy: biofilter fan No. 2 repaired on 12/9/12. Complaint received January 12, 2013 – Remedy: discussed with neighbors, altered active bay rotation and reduced fan speed.
38. The facility has a stormwater discharge National Pollutant Discharge Elimination System General Permit NCG240000, Certificate of Coverage NCG240005, effective 08/13/12.
39. The facility has three stormwater ponds. There was no indication of erosion or runoff.
40. The Moncure Fire Department will be contacted to address an emergency at the facility.
41. The facility has proper signage.
42. Access roads are of all weather construction.
43. The facility is secured by locked gate.
44. The PTO expiration date is December 8, 2015.
45. The PTO renewal application shall be submitted to the SWS at least 90 days prior to permit expiration.

Please contact me if you have any questions or concerns regarding this inspection report.



John Patrone
Environmental Senior Specialist
Regional Representative

Phone: 336-771-5095 Fax: 336-771-4631

Sent on: <u>January 28, 2013</u>	<input checked="" type="checkbox"/>	Email		Hand delivery		US Mail	Certified No. <input type="checkbox"/>
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Copies: Jason Watkins, Western District Supervisor
Jessica Montie, Compliance Officer
Tony Gallagher, Environmental Supervisor
Donna Wilson, Environmental Engineer
Liz Patterson, Composting and Land Application Branch

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Digital pictures taken January 17, 2013
by John Patrone, DWM – SWS

Facility (compost operations) building



Materials mixing and bulking pit



Active compost bay



Active compost bays, tarps across open end



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Stored material (in building open roof area/not under cover) having met PFRP, requiring VAR



Material requiring VAR screener hopper, material conveyed outside of building



Material requiring VAR in pile under screener conveyor



Biofilter, view left to right (facing rear of building)

